

**REMARKS**

Claims 1-5 and 7-21 have been examined. Claim 5 has been rejected under 35 U.S.C. § 112, first paragraph, claims 2 and 21 have been rejected under 35 U.S.C. § 112, second paragraph, claims 9, 11, 13 and 16-17 have been rejected under 35 U.S.C. § 102(b), and claims 1-5, 7-8, 10, 12, 14, 15 and 18-21 have been rejected under 35 U.S.C. § 103(a).

**I. Rejection under 35 U.S.C. § 112, first paragraph**

Claim 5 has been rejected under 35 U.S.C. § 112, first paragraph, as allegedly failing to comply with the written description requirement. The Examiner maintains that the activation/deactivation means of claim 5, and the switches of claim 1 (from which claim 5 depends), are not disclosed as being provided in the same embodiment. Accordingly, the Applicant has amended claim 5 in a manner believed to overcome the rejection.

**II. Rejection under 35 U.S.C. § 112, second paragraph**

Claims 2 and 21 have been rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

**A. Claim 2**

In regard to claim 2, the Examiner maintains that it is unclear if the muting means of claim 2 is the same muting means of claim 1. Accordingly, Applicant has amended claim 2 to

clarify that the muting means of claim 2 is the same muting means as in claim 1. Applicant submits that such amendments will overcome the rejection.

**B. Claim 21**

In regard to claim 21, the Examiner maintains that the activation/deactivation circuit lacks antecedent basis. Accordingly, Applicant has amended claim 21 in a manner believed to overcome the rejection.

**III. Rejection under 35 U.S.C. § 102(b) over U.S. Patent No. 4,752,744 to Aoki (“Aoki”)**

Claims 9, 11, 13 and 16-17 have been rejected under 35 U.S.C. § 102(b) as being anticipated by Aoki.

**A. Claim 9**

Applicant submits that claim 9 is patentable over the cited reference. For example, claim 9 recites that the control circuit detects the DC offset when the input signal is muted and no input signal is supplied to the amplifiers.

Applicant submits that Aoki fails to disclose the above feature. Since the above feature was previously recited in claim 10, and claim 10 was rejected in view of Aoki and the Grosjean reference, Applicant further submits the following comments.

In particular, the Examiner acknowledges that Aoki fails to disclose the above feature, but contends that Grosjean does. As disclosed in Grosjean, when a positive polarity DC potential is detected, the normally closed contact arms 19 are opened, which causes the source 5

to become disconnected from the power amps 9 and 11 (Fig. 2; col. 3, lines 6-15). The Examiner maintains that the opening of the contact arms 19, and the disconnection of the source 5, reads on the claimed muting of the input signal. However, Grosjean only discloses that the source 5 is cut off or muted *when* the DC offset is detected, and does not disclose that when the source 5 is *already* muted, a DC offset is then detected (i.e., *when* the input signal is muted) as recited in claim 10.

In addition, Applicant submits that there is no suggestion or motivation to modify the circuit of Aoki to have the contact arms 19 of Grosjean. In particular, Aoki specifically discloses that due to the PNP transistors 15 and 16, the offset voltage detecting circuit 14 is able to eliminate both positive and negative offset voltages arising between the output signal supply terminals 28 and 29, where terminals 28, 29 supply a load to the loudspeaker 30 (col. 7, line 23 to col. 8, line 55; col. 8, lines 56-66). Since any positive or negative offset voltage is already eliminated by the circuit of Aoki, Applicant submits that there is no motivation or need to provide the circuit of Aoki with the contact arms 19 of Grosjean (i.e., since the purpose of the contact arms 19 of Grosjean are to avoid supplying a signal to the power amps when a positive polarity DC potential is detected, which already is eliminated in Aoki).

Accordingly, Applicant submits that one skilled in the art would not be motivated to provide the contact arms 19 of Grosjean in the circuit of Aoki, and thus, claim 9 is patentable over the cited references.

**B. Claims 11, 13, 16 and 17**

Since claims 11, 13, 16 and 17 are dependent upon claim 9, Applicant submits that such claims are patentable at least by virtue of their dependency.

**IV. Rejection under 35 U.S.C. § 103(a) over Aoki in view of U.S. Patent No. 5,939,938 to Kalb et al. (“Kalb”), U.S. Patent No. 3,959,735 to GrosJean (“GrosJean”) and U.S. Patent No. 4,301,330 to Trump (“Trump”).**

Claims 1-5 and 7-8 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Aoki as applied above, and in further view of Kalb, GrosJean and Trump.

**A. Claim 1**

Applicant submits that claim 1 is patentable over the cited references. For example, claim 1 recites that an input signal to be supplied to power amplifiers is muted during a predetermined length of time.

The Examiner acknowledges that Aoki fails to disclose the above feature, but contends that Kalb does. In particular, the Examiner maintains that when the bypass switch 122 of Kalb is closed, the input signal 11 is not supplied to amps 102, 104 (Fig. 2). However, although the reference discloses that the input signal 111 is not supplied to amp 102 when the bypass switch is closed, the reference fails to disclose that the input signal 111 is also prevented from being supplied to the amp 104. As shown in Fig. 2 of Kalb, even when the bypass switch 122 is closed, the input signal can still be supplied to amp 104. Accordingly, Applicant submits that Kalb fails to cure the deficient teachings of Aoki in regard to the claimed muting means.

Claim 1 further recites that the muting means does not supply an input signal to the power amplifiers while the DC offset is detected.

The Examiner acknowledges that Aoki and Kalb fail to disclose the above feature, but contends that Grosjean does. In particular, the Examiner maintains that the use of contact arms 19 of Grosjean discloses the above feature, as well as the claimed muting means. In Grosjean, when the normally closed contact arms 19 are opened, the source 5 is disconnected from supplying a signal to the power amps 9 and 11. This occurs when a positive polarity DC potential is detected (Fig. 2; col. 3, lines 6-15). However, Grosjean only discloses that the source 5 is cut off or muted *when* the DC offset is detected, and does not disclose that when the source 5 is *already* muted, a DC offset is then detected (i.e., *while* no input signal is supplied to the power amplifiers) as recited in claim 1.

In addition, Applicant submits that there is no suggestion or motivation to modify the circuit of Aoki to have the contact arms 19 of Grosjean. In particular, Aoki specifically discloses that due to the PNP transistors 15 and 16, the offset voltage detecting circuit 14 is able to eliminate both positive and negative offset voltages arising between the output signal supply terminals 28 and 29, where terminals 28, 29 supply a load to the loudspeaker 30 (col. 7, line 23 to col. 8, line 55; col. 8, lines 56-66). Since any positive or negative offset voltage is already eliminated by the circuit of Aoki, Applicant submits that there is no motivation or need to provide the circuit of Aoki with the contact arms 19 of Grosjean (i.e., since the purpose of the contact arms 19 of Grosjean are to avoid supplying a signal to the power amps when a positive polarity DC potential is detected, which is already eliminated in Aoki).

Claim 1 further recites that switches are connected between output terminals of the power amplifiers and the speaker.

The Examiner acknowledges that Aoki, Kalb and Grosjean fail to disclose the above feature, but contends that Trump does. Trump teaches a switch 250 positioned between the speaker 70 and the amp 50 (Fig. 2). However, since Aoki already discloses that any negative or positive offset voltages are eliminated, as set forth above, Applicant submits that one skilled in the art would not be motivated to further modify the circuit of Aoki to contain the switch 250 of Trump.

In view of the above, Applicant submits that claim 1 is patentable over the cited references.

**B. Claims 2, 3, 4, 7 and 8**

Since claims 2, 3, 4, 5, 7 and 8 are dependent upon claim 1, Applicant submits that such claims are patentable at least by virtue of their dependency.

**C. Claim 5**

Since claim 5 contains features that are analogous to the features recited in claim 1, Applicant submits that claim 5 is patentable for at least analogous reasons as set forth above.

**V. Rejection under 35 U.S.C. § 103(a) over Aoki in view of GrosJean**

Claims 10, 12 and 14-15 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Aoki as applied to Claim 9 and in further view of GrosJean.

**A. Claim 10**

Since claim 10 has been canceled, without prejudice or disclaimer, and the features of claim 10 have been incorporated into claim 9, Applicant refers the Examiner to the comments provided for claim 9 above.

**B. Claims 12 and 14**

Since claims 12 and 14 have been canceled, without prejudice or disclaimer, Applicant submits that the rejection of such claims is now moot.

**C. Claim 15**

Claim 15 recites a muting control circuit adapted to mute the input signal supplied to the first and second amplifiers for a predetermined length of time.

Similar to Applicant's comments regarding claim 9, since any positive or negative offset voltage is already eliminated by the circuit of Aoki, Applicant submits that there is no motivation or need to provide the circuit of Aoki with the contact arms 19 of Grosjean (i.e., since the purpose of the contact arms 19 of Grosjean are to avoid supplying a signal to the power amps when a positive polarity DC potential is detected, which is already eliminated in Aoki). Thus,

even if the contact arms 19 disclose a type of muting control circuit, one skilled in the art would not be motivated to provide them in the circuit of Aoki.

Also, Grosjean fails to teach or suggest how long the contact arms 19 remain open, such that the reference also fails to teach or suggest the claimed “predetermined length of time.”

In view of the above, Applicant submits that claim 15 is patentable over the cited references.

**VI. Rejection under 35 U.S.C. § 103(a) over Aoki in view of Trump**

Claims 18-21 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Aoki as applied above to Claim 9, and in further view of Trump.

**A. Claim 18**

For similar reasons as set forth above in our comments regarding claim 9, Applicant submits that there is no motivation or suggestion to modify the circuit of Aoki to include the switch 250 of Trump between at least one of the amps 12 and 13 and the loudspeaker 30. In particular, since Aoki already discloses that any negative or positive offset voltages are eliminated, as set forth above, Applicant submits that one skilled in the art would not be motivated to further modify the circuit of Aoki to contain the switch 250 of Trump.

Accordingly, Applicant submits that claim 18 is patentable over the cited references.



**B. Claims 19 and 20**

Since claims 19 and 20 contain features that are analogous to the features recited in claim 18, Applicant submits that claims 19 and 20 are patentable for at least analogous reasons as presented above.

**C. Claim 21**

Since claim 21 contains features that are analogous to the features recited in claim 15, Applicant submits that claim 21 is patentable for at least analogous reasons as claim 15.

**VII. Conclusion**

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

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